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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,224	04/02/2007	Carlo Baldovino	33033-1083	6962

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EXAMINER	
REESE, ROBERT T	

ART UNIT	PAPER NUMBER
3657	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/590,224	BALDOVINO ET AL.	
	Examiner	Art Unit	
	ROBERT T. REESE	3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/21/2006, 6/5/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This communication is a first Office Action Non-Final rejection on the merits. Claims 1-31, as originally filed, are currently pending and considered below.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-6, 10, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meco et al. (2002/0015825) in view of Achten (7,396,884).

As per claim 1, Meco et al. discloses: Toothed belt (1) for use in contact with oil and comprising a body (2) and a number of teeth (4) extending from at least one first surface of said body; said teeth being coated by a first fabric (5), said fabric being externally coated with a resistant layer (8), in which: said resistant layer comprises a

fluorinated plastomer, a first elastomeric material and a vulcanization agent (Paragraph 11); said fluorinated plastomer is present in said resistant layer in a larger quantity than said first elastomeric material (Paragraph 11); aid body comprises a compound based on a second elastomeric material formed of a copolymer obtained from a dienic monomer and a monomer containing nitrile groups (HBNR, identified in the abstract).

However, Meco et al. does not disclose: said nitrile groups are in percentage between 33% and 49% in weight with respect to the weight of said copolymer.

Achten teaches Hydrogenated Nitrile Butadiene Rubber (HBNR) with a nitrile percentage of 10% to 50% (Column 2, lines 17-19).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the toothed belt of Meco et al. to use the HBNR of Achten to ensure adhesion of the resistant inserts in the belts.

As per claim 2, Achten teaches said nitrile percentage of 39% (Column 2, lines 17-19).

As per claim 3, Meco et al. discloses: characterized in that said second elastomeric material comprises hydrogenated butadiene acrylonitrile (Paragraph 19).

As per claim 4, Meco et al. discloses: said hydrogenated butadiene acrylonitrile is modified with a zinc salt of polymethacrylic acid (paragraph 33).

As per claim 5, Meco et al. discloses: said resistant layer comprises said fluorinated plastomer in a quantity in weight of between 101 and 150 parts in weight with respect to said elastomeric material (paragraph 31).

As per claim 6, Meco et al. discloses: said fluorinated plastomer is polytetrafluoroethylene (paragraph 33 and abstract).

As per claim 10, Meco et al. discloses: said elastomeric material comprises fibers (paragraph 19).

As per claim 12, Meco et al. discloses: resistant inserts (3) chosen from the group consisting of aramidic fibers, PBO and carbon fibers (paragraph 22).

As per claim 15, Meco et al. discloses: the teeth (4) are treated with a polymer resistant to expansion (This is construed as an inherent property of the coating).

4. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Meco et al. and Acton in view of Osaka et al. (7,056,249).

As per claim 7, the combination of Meco et al. and Action disclose all of the structural elements of claim 1 above.

However, the combination of Meco et al. and Action does not disclose: that the back of said belt is coated by a second fabric.

Osaka et al. teaches a power transmission belt that has the back of said belt is coated by a second fabric (56).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the toothed belt of the combination of Meco et al. and Action with the back fabric of Osaka et al. to provide additional protection to the belt from environmental elements in the car engine, particularly oil, to extend the life of the belt.

As per claims 8 and 9, Osaka et al. teaches: (claim 8) that the second fabric is coated on the outside by a second resistant layer (column 4, lines 60-61and (claim 9) the second resistant layer is equal to said first resistant layer (column 4, lines 60-61). (It is construed that the statement that the back side cloth layer may have the same construction as the cover layer over the teeth includes the resistant layer.)

5. Claims 11, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over combination of Meco et al. and Action in view of Knutson (6,945,891).

As per claim 11, 13, and 14, the combination of Meco et al. and Action disclose all of the structural elements of claim 1 above.

However, the combination of Meco et al. and Action does not explicitly disclose: (claim 11) said fibers are present in a quantity in weight of between 0.5 and 15% with respect to said elastomeric material, (claim 13) said restraint inserts have been treated with an RFL comprising an oil-resistant latex, and (claim 14) said latex comprises an elastomeric material formed of a copolymer obtained from a dienic monomer and a monomer containing nitrile groups.

Knutson teaches a power transmission belt that has (claim 11) fiber-loading level from 0.5 to 20 phr (column 4, lines 23-25), (claim 13) said restraint inserts (18) have been treated with an RFL comprising an oil-resistant latex (column 6, lines 8-44), and (claim 14) said latex comprises an elastomeric material formed of a copolymer obtained from a dienic monomer and a monomer containing nitrile groups (column 6, lines 45-60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the toothed belt of the combination of Meco et al. and Action with the fiber content, restraint insert treatment of RFL and latex, and the latex composition as taught by Knutson to ensure adhesion of the restraint elements in the belt.

6. Claims 16-21, 25, 27, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Meco et al. and Achten, further in view of Ullein et al. (5,967,922).

As per claim 16, the combination of Meco et al. and Achten discloses: (from Meco et al.) A toothed belt (1) for use in contact with oil and comprising a body (2) and a number of teeth (4) extending from at least one first surface of said body; said teeth being coated by a first fabric (5), said fabric being externally coated with a resistant layer (8), in which: said resistant layer comprises a fluorinated plastomer, a first elastomeric material and a vulcanization agent (Paragraph 11); said fluorinated plastomer is present in said resistant layer in a larger quantity than said first elastomeric material (Paragraph 11); aid body comprises a compound based on a second elastomeric material formed of a copolymer obtained from a dienic monomer and a monomer containing nitrile groups (HBNR, identified in the abstract), and (from Achten) Hydrogenated Nitrile Butadiene Rubber (HBNR) with a nitrile percentage of 10% to 50% (Column 2, lines 17-19).

However, the combination of Meco et al. and Achten does not explicitly disclose: a timing control system for a motor vehicle comprising at least one drive pulley, and one driven pulley.

Ullien et al. teaches a tensioning device comprising at least one drive pulley (5), and one driven pulley (7).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the toothed belt disclosed by the combination of Meco et al. and Acten with the drive and driven pulleys taught by Ullien et al. to provide a tensioning device for a control gear in an automobile.

As per claim 17, Achten teaches said nitrile percentage of 39% (Column 2, lines 17-19).

As per claim 18, Meco et al. discloses: characterized in that said second elastomeric material comprises hydrogenated butadiene acrylonitrile (Paragraph 19).

As per claim 19, Meco et al. discloses: said hydrogenated butadiene acrylonitrile is modified with a zinc salt of polymethacrylic acid (paragraph 33).

As per claim 20, Meco et al. discloses: said resistant layer comprises said fluorinated plastomer in a quantity in weight of between 101 and 150 parts in weight with respect to said elastomeric material (paragraph 31).

As per claim 21, Meco et al. discloses: said fluorinated plastomer is polytetrafluoroethylene (paragraph 33 and abstract).

As per claim 25, Meco et al. discloses: said elastomeric material comprises fibers (paragraph 19).

As per claim 27, Meco et al. discloses: resistant inserts (3) chosen from the group consisting of aramidic fibers, PBO and carbon fibers (paragraph 22).

As per claim 30, Meco et al. discloses: the teeth (4) are treated with a polymer resistant to expansion (This is construed as an inherent property of the coating).

As per claim 31, Ullien et al. et al. teaches: a sliding block (17 or 18).

7. Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Meco et al., Achten, and Ullien et al. in view of Osaka et al. (7,506,249).

As per claim 22, the combination of Meco et al., Action and Ullien et al. disclose all of the structural elements of claim 16 above.

However, the combination of Meco et al., Action and Ullien et al. does not disclose: that the back of said belt is coated by a second fabric.

Osaka et al. teaches a power transmission belt that has the back of said belt is coated by a second fabric (56).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the toothed belt of the combination of Meco et al., Action and Ullien et al. with the back fabric of Osaka et al. to provide additional protection to the belt from environmental elements in the car engine, particularly oil, to extend the life of the belt.

As per claims 23 and 24, Osaka et al. teaches: (claim 23) that the second fabric is coated on the outside by a second resistant layer (column 4, lines 60-61 and (claim 24) the second resistant layer is equal to said first resistant layer (column 4, lines 60-

61). (It is construed that the statement that the back side cloth layer may have the same construction as the cover layer over the teeth includes the resistant layer.)

8. Claims 26, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Meco et al., Achten, and Ullien et al., in view of Knutson (6,945,891).

As per claim 26, 28, and 29, the combination of Meco et al., Achten, and Ullien et al. disclose all of the structural elements of claim 16 above.

However, the combination of Meco et al., Achten, and Ullien et al. does not explicitly disclose: (claim 26) said fibers are present in a quantity in weight of between 0.5 and 15% with respect to said elastomeric material, (claim 28) said restraint inserts have been treated with an RFL comprising an oil-resistant latex, and (claim 29) said latex comprises an elastomeric material formed of a copolymer obtained from a dienic monomer and a monomer containing nitrile groups.

Knutson teaches a power transmission belt that has (claim 26) fiber-loading level from 0.5 to 20 phr (column 4, lines 23-25), (claim 28) said restraint inserts (18) have been treated with an RFL comprising an oil-resistant latex (column 6, lines 8-44), and (claim 29) said latex comprises an elastomeric material formed of a copolymer obtained from a dienic monomer and a monomer containing nitrile groups (column 6, lines 45-60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the toothed belt of the combination of Meco et al., Achten, and Ullien et al. with the fiber content, restraint insert treatment of RFL and

latex, and the latex composition as taught by Knutson to ensure adhesion of the restraint elements in the belt.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pinkey (2,585,583) discloses hydrogenated butadiene-acrylo – nitrile copolymer. Danhauer et al. (2002/0098935) discloses a fabric cushion V-ribbed belt. Mashimo et al. (4,498,891) discloses a drive belt with tensile cords. Welk et al. (2004/0033857) discloses a belt.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT T. REESE whose telephone number is (571) 270-5794. The examiner can normally be reached on M_F 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RTR

/Robert A. Siconolfi/
Supervisory Patent Examiner, Art Unit 3657